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EXAMINER

KUMAR, KALYANA VENKA K

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/830,229	Applicant(s) UMEDA, MASAYOSHI	
	Examiner KALYANA VENKATESHWAR KUMAR	Art Unit 3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-12 and 14-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-12 and 14-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-4, 6-12, and 14-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation, "the supporter roller unit is *only* driven by contact with the rotatable belt or passing coin," in claims 1, 9, 10, 11, and 27 does not appear within the original disclosed specification. Specifically, the limitation that the supporter roller unit is *only* driven by the belt or a passing coin does not have support in the specification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4, 6-12, and 14-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Regarding claims, 1, 9-11, and 27, the claims state, "the supporter roller is *only* driven by contact with the rotatable belt or passing coin," is unclear. It is unclear how

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the *only* driving forces of the supporter roller can be the rotatable belt or passing coin.

As seen in paragraph 0047, the supporting rollers 68 and 70 derive a force from level 64 that drives the supporting rollers in a clockwise direction.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4, 6-8, 10-12, 14, 15, 17, 20, 21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Furukawa (USP 6,086,472)** in view of **Stoltz et al (USP 6,059,650)**.

8. Regarding claims 1, 2, 4, 6, 7, 10, 12, 14, 15, 17, 20, 21, 26, and 27, Furukawa discloses coin separating unit comprising: a coin transporting unit including a first flexible rotatable belt and a second rotatable belt (12 and 16) for receiving coins of different size on a support surface that translates the coins linearly, where the coin transporting unit provides forward drive of the coins (see Fig. 2, elements 12 and 13), for subsequent processing, the support surface having a predetermined flexibility and friction characteristic to engage the coins for translation and to enable coin movement transverse to a direction of movement (a belt would be inherently capable of having flexibility in order to run around the rollers and therefore when coins are pressed into the belt, it will flex and move away and further help prevent jams); a separating roller unit

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rigidly fixed above the support surface and rotates so that its surface closest to the support surface is moving opposite to the translation direction of the support surface (see Fig.2, element 15), the surface of the separating roller unit closest to the support surface moving in a direction opposite to the movement of the support surface (see Fig. 2), but Furukawa does not disclose the separating roller unit positioned above the support surface at a distance no greater than twice the thickness of the coins to be separated and a supporter roller unit mounted on a pivotable lever operatively located upstream of the separating roller unit, relative to movement of the support surface and adjacent the separating roller unit, the supporter unit is movably located above the support surface by a distance which approximates the thickness of the coins to be separated wherein the supporter unit can move transverse to the support surface when engaging a coin and can assist in preventing more than one coin from passing beneath it before the coin engages the separating roller unit, the separating roller unit and the roller member rotates about parallel axes extending across the support surface whereby the separating roller unit and the roller member when contacting a coin in translation, and . Stoltz teaches the separating roller unit positioned above the support surface at a distance no greater than twice the thickness of the coins to be separated (col. 4, lines 41-46) and a supporter roller unit (111) mounted on a pivotable lever is operatively located upstream of the separating roller unit (the supporter unit and separating unit are spring biased, col. 10, lines 10-17, the supporter unit is freewheeling and therefore capable making contact and rotating with the rotatable belt), relative to movement of the support surface and adjacent the separating roller unit, the diameter of the separating

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roller is twice a diameter of the supporter unit (see Fig. 4, elements 111 versus 112), the supporter unit is movably located above the support surface by a distance which approximates the thickness of the coins to be separated wherein the supporter unit can move transverse to the support surface when engaging a coin and can assist in preventing more than one coin from passing beneath it before the coin engages the separating roller unit, the separating roller unit and the roller member rotates about parallel axes (see Fig. 4) extending across the support surface whereby the separating roller unit and the roller member when contacting a coin in translation for the purpose of singulating the feeding of coins (col. 10, lines 10-17). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Furukawa's coin separating unit with a support unit, as taught by Stoltz, for the purpose of singulating the feeding of coins.

9. Regarding claim 8, Furukawa discloses a second coin transporting unit (16) for receiving a coin from the first coin transporting unit and translating the coin at a faster speed than the first coin translating unit (col. 2, lines 52-53).

10. Regarding claims 5 and 13, the claims have been canceled.

11. Claim 3, 11, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa in view of Stoltz as applied to claim 1 above, and further in view of **Shirasawa (USP 5,355,988)**.

12. Regarding claims 3, 11, 16, 18, and 19 as best understood by the Examiner, Furukawa/Stoltz discloses all the limitations of the claims as stated above, but Furukawa/Stoltz does not disclose a first and second coin drawing auxiliary roller

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located downstream of the separating roller unit and a second coin transporting unit beneath the drawing auxiliary roller and has a distance which is, at most, thinner than the thinnest coin and is located away from the second coin transporting unit. Shirasawa teaches a coin drawing auxiliary roller (57), located downstream of the separating roller unit and a second coin transporting unit beneath the drawing auxiliary roller (see Figs. 4-6) and has a distance which is, at most, thinner than the thinnest coin and is located away from the second coin transporting unit for the purpose of maintaining the direction of the coins (col. 4, lines 22-26). Further, a second drawing auxiliary roller would have been obvious to have duplicated a drawing auxiliary roller to perform the same and predictable function as the previous auxiliary roller (see MPEP 2144.04 (VI)).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Furukawa/Stoltz's coin separating unit to include a drawing auxiliary unit, as taught by Shirasawa, for the purpose of maintaining the direction of the coins.

13. Claim 9, 22, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa in view of Stoltz as applied to claim 1 above, and further in view of **DeVries et al (US Pub 2004/0134757 A1)**.

14. Regarding claims 9, 22, 23, and 28, Furukawa/Stoltz discloses all the limitations of the claims stated above and also including a coin hopper for receiving various coins of different sizes in bulk (11), but Furukawa/Stoltz does not disclose a coplanar pivoting support member with an elongated surface for supporting an underside of the rotating belt and with trailing and leading edges configured to reduce interference. DeVries

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teaches a coplanar (the definition of the coplanar being or operating in the same plane, therefore, is coplanar along the contact portion of the DeVries reference) pivoting support member with an elongated surface for supporting an underside of the rotating belt (19, elongated surface is disclosed in the DeVries reference by the long transverse contact by the DeVries reference as seen in Fig. 1) for the purpose of keeping the conveyor belts free of debris (see Abstract). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Furukawa/Stoltz with a pivoting support member, as taught by DeVries, for the purpose of keeping the conveyor belts free of debris.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa in view of Stoltz as applied to claim 11 above, and further in view of **Takahashi et al (USP 5,595,284)**.

16. Regarding claim 24, Furukawa/Stoltz discloses all the limitations of the claims, but Furukawa/Stoltz does not disclose the rotatable flexible belt is formed with a urethane rubber surface and a polyamide core. Takahashi teaches a urethane rubber surface (col. 1, lines 8-11) a polyamide core (col. 1, lines 12-23) for the purpose of making a stronger but more durable conveyor belt (col. 2, lines 42-49). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Furukawa/Stoltz's belt to be a urethane rubber surface with a polyamide core, as taught by Takahashi, for the purpose of making a stronger but more durable conveyor belt.

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17. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa in view of Stoltz as applied to claim 1 above, and further in view of **Yano (USP 6,467,767)**.

18. Regarding claim 25, Furukawa/Stoltz discloses all the limitations of the claims, but Furukawa/Stoltz does not disclose a one way clutch member provides rotation to the separating roller. Yano teaches a one way clutch member provides rotation to the separating roller for the purpose of regulating separation of the articles (col. 11, lines 13-15). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Furukawa/Stoltz's separating roller to have a one way clutch, as taught by Yano, for the purpose of regulating separation of the articles.

Response to Arguments

19. Applicant's arguments filed 6/17/2008 have been fully considered but they are not persuasive.

20. Rejections under USC 112

21. Regarding rejections under USC 112, the rejections have been withdrawn due to Applicant's amendment.

22. Rejections under USC 103

23. Regarding Applicant's argument, "The Office Action acknowledges that Furukawa does not have the supporter unit 22 of the present invention. Furthermore, as seen in the reproduced portion of Figure 3 reproduced below, the spatial relationship

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between sensors 14 and belt 12 prevents 'coin movement transverse to a direction of movement' to any significant degree. If belt 12 were to deflect to accommodate stacked coins, it would contact the sensors 14 and cause damage or malfunction," the Examiner disagrees. The Examiner asserts that the belt would be capable of 'coin movement transverse to a direction of movement' as all belts would need some degree of flexibility to function in the rotating belt configuration. Further, the Applicant states that it would not have transverse movement to any *significant degree*. What distance would a significant degree of transverse movement comprise?

24. Regarding Applicant's argument, "Stoltz does not teach 'a supporter roller unit mounted on a pivotable lever which is operatively located upstream of the separating roller...' and is only 'driven by contact with the rotatable belt or passing coin....' Of Independent Claims 1, 9, 10, 11, or 27 as there are no rollers upstream of the stripper roller 111 in Stoltz. In addition to being downstream of the stripper roller 111, feed roller 112 cannot be considered a supporter roller member 68 or 70 of the present invention because it is driven by surface contact to the stripper roller 111 and not by 'contact with the rotatable belt or passing coin....," the Examiner disagrees. The Examiner asserts, as stated earlier, that the limitation that the supporter roller is *only* driven does is not disclosed in the original disclosure of the specification and further it is unclear how the supporter roller is driven *only* by the rotatable belt or passing coin when the lever 64 provides force in the clockwise direction to the supporter rollers 68 and 70 and therefore driving them in a direction.

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25. Regarding Applicant's argument that the DeVries reference does not teach the limitations of claims 9, 22, and 23, the Examiner disagrees. The Examiner asserts that the DeVries reference is used to show that it is obvious to have a resilient support member support a belt roller regardless of other functions.

26. Regarding Applicant's argument, "The Office Action cites Yano as having a one way clutch providing rotation to the separating roller. However, Yano does not solve the deficiencies of the Furukawa and Stoltz references. Further, as Yano is directed to a collator for flexible sheets of paper of essentially a uniform thickness, it would not be obvious for person of ordinary skill in the art of coin sorting, particularly for coins of different thicknesses to consider the Yano reference," the Examiner disagrees. The Examiner asserts that the use of the Yano reference is that it would be obvious to use a one way clutch in a separation mechanism. The combined teaching would then teach the separation of coins of different thickness.

27. Regarding applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the references are combined to teach the concepts of separating and supporting rollers together (Stoltz) and the concept of having resilient members supporting rotating belts (DeVries).

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

29. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan Kumar whose telephone number is 571-272-8102. The examiner can normally be reached on Mon-Fri 7:00AM-3:30PM.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick H. Mackey/
Supervisory Patent Examiner, Art
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Kalyan Kumar

Examiner

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